ARM Group Inc.
Earth Resource Engineers and Consultants

August 24, 2011

Mr. John Thompson
Baltimore Development Corporation
36 South Charles Street, Suite 1600
Baltimore, MD 21201

Re: Pre-Demolition / Pre-Renovation
Inspection Report
NoHo Pilot Project
411, 413, and 415 North Howard Street
Baltimore City, Maryland
ARM Project M11130

Dear Mr. Thompson:

ARM Group Inc. (ARM) has completed a Pre-Demolition Inspection of the subject site located at 411, 413, and 415 North Howard Street in the City of Baltimore, Maryland (Figure 1). This inspection included: an asbestos-containing material (ACM), lead-base paint (LBP), and hazardous material (HAZMAT) inspection. The purpose of this investigation was to determine the location and quantity of ACMs, LBP and HAZMATs within the on-site buildings prior to demolition / renovation activities. The scope of work for this inspection consisted of the following activities:

- a visual and tactile ACM inspection, which included the collection of samples from suspect materials for laboratory analysis;
- a determination for the potential presence of LBP (presumed for coatings applied prior to 1978), based on the use of colorimetric swabs; and,
- a general HAZMAT evaluation, which included an inspection for the presence of PCB-containing equipment, mercury-containing switches and equipment, storage tanks, and drummed and containerized substances and wastes.

It should be noted that all three of the on-site buildings are in very poor condition and, as such, portions of the on-site buildings were only partially observed due to building deterioration, safety concerns, inaccessibility, or the lack of an identifiable access point.

A detailed discussion of these tasks and the associated findings is presented below.

1129 West Governor Road • P.O. Box 797 • Hershey, PA 17033-0797
voice: (717) 533-8600 • fax: (717) 533-8605 • e-mail: info@armgroup.net

## ACM INSPECTION

The asbestos inspection consisted of a building walk-through to visually inspect for the presence of materials suspected of containing asbestos. As suspect materials were visually identified, bulk samples were collected utilizing sampling tools (i.e., screwdriver, utility knife, etc.), and placed into individual containers, and labeled with unique sample identification numbers. A total of 18 suspect materials were identified and sampled. A description of all suspect ACMs identified during the inspection is provided in Table 1.

The asbestos samples were submitted to EMSL Analytical, Inc. (EMSL) in Plymouth Meeting, Pennsylvania for laboratory analysis for percent asbestos content. EMSL participates in the United States Environmental Protection Agency (USEPA) quality assurance program and is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP) for asbestos bulk fiber analysis by Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) (NVLAP Certification Number 101048-0).

Friability of sampled suspect material was assessed in accordance with 40 CFR Part 763, by the Asbestos Inspector at the time of the inspection. Friable materials are those that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable materials are those that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable materials are further categorized by the USEPA revised asbestos National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations (40 CFR Part 61 subpart M) as either Category I or Category II Non-friable ACMs. Category I ACMs are defined as asbestos-containing resilient flooring and mastic, asphalt roofing products, and packings and gaskets. Category II ACMs are defined as all remaining types of non-friable ACMs not included in Category I. An example of Category II would be asbestos cement products such as transite.

The USEPA defines an “asbestos containing material” as any building material that contains greater than one percent of any type of asbestos (40 CFR Part 763.83). See Appendix A for notes and definitions. The laboratory results for the sampled ACMs are presented in Appendix B and summarized below on Table 1.

**Table 1**
**Asbestos Bulk Sample Results**

| Homogenous Material Description | Location(s) | Quantity | Sample ID | Result | Analytical Method | Type / Category / Condition |
|---|---|---|---|---|---|---|
| **9x9 Grey Floor Tile** | **411 N. Howard 1st Floor** | **Approx 1,500 SF** | **411-1A** | **10% Chrysotile** | **600/R-93/116** | **NESHAP Cat I Non-Friable** |
| | | | 411-1B | Not Analyzed | | |
| Mastic From Above | 411 N. Howard 1st Floor | Approx 1,500 SF | 411-1A | None Detected | 600/R-93/116 | --- |
| | | | 411-1B | None Detected | | |
| **9x9 Black Floor Tile** | **411 N. Howard 1st Floor** | **Approx 1,500 SF** | **411-2A** | **5% Chrysotile** | **600/R-93/116** | **NESHAP Cat I Non-Friable** |
| | | | 411-2B | Not Analyzed | | |

**Table 1 (Continued)**
**Asbestos Bulk Sample Results**

| Homogenous Material Description | Location(s) | Quantity | Sample ID | Result | Analytical Method | Type / Category / Condition |
|---|---|---|---|---|---|---|
| Mastic From Above | 411 N. Howard 1st Floor | Approx 1,500 SF | 411-2A | None Detected | 600/R-93/116 | --- |
| | | | 411-2B | None Detected | | |
| 12x12 Brown/White Ceiling Tile | 411 N. Howard 1st Floor | Approx 3,000 SF | 411-3A | None Detected | 600/R-93/116 | --- |
| | | | 411-3B | None Detected | | |
| 12x12 Brown Floor Tile | 411 N. Howard 2nd Floor | Approx 2,000 SF | 411-4A | None Detected | 600/R-93/116 | --- |
| | | | 411-4B | None Detected | | |
| Mastic From Above | 411 N. Howard 2nd Floor | Approx 1,250 SF | 411-4A | None Detected | 600/R-93/116 | --- |
| | | | 411-4B | None Detected | | |
| Black Tar Paper | 413 N. Howard 1st Floor Boiler Room | Approx 200 SF | 413-1A | None Detected | 600/R-93/116 | --- |
| | | | 413-1B | None Detected | | |
| **9x9 Blue Floor Tile** | **413 N. Howard 1st Floor** | **Approx 1,000 SF** | **413-2A** | **5% Chrysotile** | **600/R-93/116** | **NESHAP Cat I Non-Friable** |
| | | | 413-2B | None Detected | | |
| **Mastic From Above** | **413 N. Howard 1st Floor** | **Approx 1,000 SF** | **413-2A** | **3% Chrysotile** | **600/R-93/116** | **NESHAP Cat I Non-Friable** |
| | | | 413-2B | None Detected | | |
| **12x12 Gray Floor Tile** | **413 N. Howard 1st Floor** | **Approx 2,000 SF** | **413-3A** | **3% Chrysotile** | **600/R-93/116** | **NESHAP Cat I Non-Friable** |
| | | | 413-3B | Not Analyzed | | |
| Mastic From Above | 413 N. Howard 1st Floor | Approx 2,000 SF | 411-3A | None Detected | 600/R-93/116 | --- |
| | | | 411-3B | None Detected | | |
| **12x12 Black Floor Tile** | **413 N. Howard 1st Floor (Beneath Above)** | **Approx 2,000 SF** | **413-4A** | **8% Chrysotile** | **600/R-93/116** | **NESHAP Cat I Non-Friable** |
| | | | 413-4B | Not Analyzed | | |
| Mastic From Above | 413 N. Howard 1st Floor (Beneath Above) | Approx 2,000 SF | 413-4A | None Detected | 600/R-93/116 | --- |
| | | | 413-4B | None Detected | | |
| Carpet Backing | 413 N. Howard 2nd Floor | Approx 2,000 SF | 413-5A | None Detected | 600/R-93/116 | --- |
| | | | 413-5B | None Detected | | |
| Mastic From Above | 413 N. Howard 2nd Floor | Approx 2,000 SF | 413-5A | None Detected | 600/R-93/116 | --- |
| | | | 413-5B | None Detected | | |
| 12x12 Gray Floor Tile | 415 N. Howard 1st Floor | Approx 5,000 SF | 415-1A | None Detected | 600/R-93/116 | --- |
| | | | 415-1B | None Detected | | |
| Mastic From Above | 415 N. Howard 1st Floor | Approx 5,000 SF | 415-1A | None Detected | 600/R-93/116 | --- |
| | | | 415-1B | None Detected | | |
| 2x4 Gray/White Ceiling Tile | 415 N. Howard 1st Floor | Approx 1,500 SF | 415-2A | None Detected | 600/R-93/116 | --- |
| | | | 415-2B | None Detected | | |
| White Plaster Skim Coat | 415 N. Howard 1st Floor | Unknown | 415-3A | None Detected | 600/R-93/116 | --- |
| | | | 415-3B | None Detected | | |

**Table 1 (Continued)**
**Asbestos Bulk Sample Results**

| Homogenous Material Description | Location(s) | Quantity | Sample ID | Result | Analytical Method | Type / Category / Condition |
|---|---|---|---|---|---|---|
| **Transite Wall Board** | **415 N. Howard 1st Floor** | **Unknown** | **415-4A** | **30% Chrysotile** | **600/R-93/116** | **NESHAP Cat II Non-Friable** |
| | | | 415-4B | Not Analyzed | | |
| 9x9 Brown Floor Tile | 415 N. Howard 2nd Floor | Approx 2,000 SF | 415-5A | None Detected | 600/R-93/116 | --- |
| | | | 415-5B | None Detected | | |
| Mastic From Above | 415 N. Howard 1st Floor | Approx 2,000 SF | 415-5A | None Detected | 600/R-93/116 | --- |
| | | | 415-5B | None Detected | | |
| 9x9 Black Floor Tile | 415 N. Howard 2nd Floor | Approx 2,000 SF | 415-6A | None Detected | 600/R-93/116 | --- |
| | | | 415-6B | None Detected | | |
| Mastic From Above | 415 N. Howard 1st Floor | Approx 2,000 SF | 415-6A | None Detected | 600/R-93/116 | --- |
| | | | 415-6B | None Detected | | |
| 9x9 Green Floor Tile | 415 N. Howard 2nd Floor | Approx 1,000 SF | 415-7A | None Detected | 600/R-93/116 | --- |
| | | | 415-7B | None Detected | | |
| Mastic From Above | 415 N. Howard 1st Floor | Approx 1,000 SF | 415-7A | None Detected | 600/R-93/116 | --- |
| | | | 415-7B | None Detected | | |
| Roofing Material Debris | All Buildings | Unknown | 415-8A | None Detected | 600/R-93/116 | --- |
| | | | 415-8B | None Detected | | |
| **6" Pipe Insulation** | **413 N. Howard Basement** | **300 LF** | **PACM** | | | **Friable** |
| **6" Pipe Insulation** | **415 N. Howard Basement** | **300 LF** | **PACM** | | | **Friable** |

Notes: Bold text indicates positive asbestos result.
See Appendix B for the complete laboratory report and Terms and Definitions

As indicated on Table 1, in total, the ACM Inspection identified approximately 8,000 square feet of resilient floor covering and /or mastic, an unknown quantity of transite wall board, and 600 linear feet of pipe insulation. A breakdown of these materials per type and location is presented below:

- 411 North Howard Street
  - The 9x9 gray floor tile within the first floor.
  - The 9x9 black floor tile within the first floor.

- 413 North Howard Street
  - The 9x9 blue floor tile and associated mastic within the first floor.
  - The 12x12 gray floor tile within the first floor.
  - The 12x12 black floor tile within the first floor beneath the 12x12 gray floor tile.
  - The 6"pipe insulation within the basement.

- 415 North Howard Street
  - The transite wallboard within the first floor.
  - The 6"pipe insulation within the basement.

It should also be noted that boilers were present within the basement of each of the buildings and it is possible that the interior liners of the boilers consist of ACMs. Furthermore, it is likely that additional ACMs are present behind the walls, ceilings, and other areas that were not accessible at the time of the inspection.

The resilient floor covering (i.e., floor tiles and mastic) as identified above, are considered to be Category I non-friable materials. According to the asbestos NESHAP, Category I materials, which are not in poor condition and not friable prior to demolition / renovation, do not have to be removed prior to demolition / renovation activities except where demolition will be by intentional burning.

The transite wall board, as identified above, is considered to be a Category II non-friable material. According to the asbestos NESHAP, Category II materials, such as transite wall board, must be removed prior to demolition if there is a high probability that it will be crumbled, pulverized, or reduced to powder during demolition activities. The USEPA has taken the position that most demolition activities will cause Category II materials to be crumbled, pulverized, or reduced to powder and therefore should be removed. However, the final determination is the responsibility of the owner or operator and should be made on a case-by-case basis based on the demolition techniques to be used.

The pipe insulation, as identified above, is considered to be a friable material. According to the asbestos NESHAP, friable materials are considered to be a regulated asbestos-containing material (RACM) and must be removed by a licensed asbestos abatement company prior to any demolition / renovation activities.

## LBP INSPECTION

The purpose of the limited LBP inspection was to determine if LBP is present in and / or on the on-site building. The limited LBP inspection included a visual inspection of the on-site building to identify interior / exterior building surfaces that are suspected to have been painted with LBP, and the use of colorimetric paint swabs to determine if the paint is an LBP. Results of the limited LBP inspection indicated that surfaces within the buildings have been panted with LBP. Specifically, painted surfaces that were determined to have consisted of LBP included the white and light green paint of the masonry walls within all three buildings.

Abatement of the LBP is not required prior to the demolition of buildings. However, it is ARMs understanding that portions of the buildings may be left in place and, therefore, it would be necessary to conduct LBP abatement activities prior to redevelopment activities. In either case, it will be necessary to adhere to applicable Occupational Safety and Health Administration (OSHA) regulations regarding LBP as associated with worker safety during the demolition of

these buildings. In addition, Toxicity Characteristic Leaching Procedure (TCLP) analysis will be required prior to the waste disposal of any demolition waste removed from the subject site.

## HAZMAT INSPECTION

The purpose of the limited HAZMAT inspection was to determine if mercury-containing switches, PCB-containing fluorescent light ballasts, or other identifiable hazardous materials are located within the on-site buildings. The inspection included a visual inspection only and revealed the following:

- 411 North Howard Street
  - Approximately 34 fluorescent light fixtures were observed within this building. The ballasts associated with the fixtures are suspected to contain PCBs, and the fluorescent light tubes associated with each fixture are suspected to contain mercury. Approximately 92 fluorescent light tubes are potentially present.
  - An elevator and associated hydraulic tank were observed. The hydraulic fluid associated with the elevator is suspected to be PCB-containing.
  - Several 35-gallon drums and 5-gallon pails were observed within the basement. Most were noted to be in poor condition and are suspected to be empty.

- 413 North Howard Street
  - Approximately 50 fluorescent light fixtures were observed within this building. The ballasts associated with the fixtures are suspected to contain PCBs, and the fluorescent light tubes associated with each fixture are suspected to contain mercury. Approximately 170 fluorescent light tubes are potentially present.
  - One mercury-containing thermostat was observed within this building.
  - Two 275-gallon aboveground storage tanks were observe within this building.
  - An elevator was observed within this building. The hydraulic fluid associated with the elevator is suspected to be PCB-containing.

- 415 North Howard Street
  - Approximately 41 fluorescent light fixtures were observed within this building. The ballasts associated with the fixtures are suspected to contain PCBs, and the fluorescent light tubes are suspected to contain mercury. Approximately 112 fluorescent light tubes are potentially present.
  - One mercury-containing thermostat was observed within this building.
  - An elevator was observed within this building. The hydraulic fluid associated with the elevator is suspected to be PCB-containing.
  - At least twenty-five 35-gallon poly drums labeled as containing corrosives and detergents and at least twenty-five unlabeled 5-gallon pails were observed in the basement of this building.
  - Several additional unlabeled containers ranging in size from 55-gallon drums to 5 gallon pails were observed on the first and second floor of this building.

- Twenty plus 5-gallon pails of roofing materials were observed on the third floor of this building.
- Dry-cleaning equipment and associated process tanks were observed on the first and second floor of this building.

The ballasts associated with the fluorescent light fixtures should be treated as PCB-containing waste, and the light tubes should be treated as a mercury-containing waste, (unless sampling or documentation proves otherwise) and both the ballasts and the light tubes should be properly handled and disposed of in accordance with OSHA, USEPA, and Maryland Department of the Environment (MDE) regulations prior to demolition / renovation activities. In addition, it should be noted that additional PCB-containing electrical equipment may be present within the on-site buildings.

The mercury-containing thermostats should be removed prior to the demolition / renovation of the buildings and they should be properly handled and disposed of in accordance with OSHA, USEPA, and MDE regulations prior to demolition activities.

The identified hazardous materials containers (paint cans, drum, etc.) and the dry-cleaning equipment should be removed prior to the demolition / renovation of the on-site buildings and they should be properly handled and disposed of in accordance with OSHA, USEPA, and MDE regulations prior to demolition activities.

## UTILITY INSPECTION

The purpose of the limited utility inspection was to identify, where possible, all utilities, with the exception of communications, connected to each of the on-site buildings. It should be noted that this inspection is considered to be a preliminary inspection designed to identify possible utility-related concerns that a demolition contractor may encounter during the preparation for the demolition of the on-site structures, and should not be taken as an all-inclusive inventory of on-site utilities. The utility inspection included only a visual inspection of the subject site.

The inspection revealed that, in general, water, sewer, and electric utilities were connected to each of the on-site buildings within the basements of the buildings along North Howard Street. This conclusion is based on the presence of several manhole covers and water meter and shutoff points within the sidewalk along North Howard Street.

## SUMMARY OF FINDINGS

This investigation has revealed the following:

The ACM Inspection identified approximately 8,000 square feet of resilient flooring, 1,000 square feet of mastic associated with the flooring, 600 linear feet of pipe insulation, and an unknown quantity of transite wall board. It should also be noted that boilers were present within

the basement of each of the buildings and it is possible that the interior liners of the boilers consist of ACMs. Furthermore, it is likely that additional ACMs are present behind the walls, ceilings, and other areas that were not accessible at the time of the inspection.

The LBP Inspection identified several surfaces within the building that were painted with LBP.

The HAZMAT Inspection identified at least 125 fluorescent light fixtures that are suspected to include PCB-containing ballasts, approximately 374 mercury-containing fluorescent light tubes, at least 2 mercury-containing thermostats, two 275-gallon aboveground storage tanks , three elevators potentially with PCB-containing hydraulic fluid, dry-cleaning equipment, and numerous containers (contents unknown) ranging in size from 55-gallon drums to 5-gallon pails.

## CONCLUSIONS AND RECOMMENDATIONS

The ACM Inspection identified approximately 8,000 square feet of resilient flooring, 600 linear feet of pipe insulation, and an unknown quantity of transite wall board. It should also be noted that boilers were present within the basement of each of the buildings and it is possible that the interior liners of the boilers consist of ACMs. Furthermore, it is likely that additional ACMs are present behind the walls, ceilings, and other areas that were not accessible at the time of the inspection. To the extent that it is safe to do so, these materials should be removed prior to the demolition / renovation of the on-site buildings and such work should be completed in accordance with OSHA, USEPA, MDE, Maryland Department of Labor, Licensing, and Regulation (MDLLR), and United States Department of Transportation (USDOT) regulations.

The LBP Inspection identified several surfaces within the buildings that were painted with LBP. Abatement of the LBP is not required prior to the demolition of buildings. However, it is ARMs understanding that portions of the buildings may be left in place and, therefore, it would be necessary to conduct LBP abatement activities prior to redevelopment activities. In either case, it will be necessary to adhere to applicable OSHA regulations regarding LBP as associated with worker safety during the demolition of these buildings. In addition, TCLP analysis will be required prior to the waste disposal of any demolition waste removed from the subject site.

The HAZMAT Inspection identified at least 125 fluorescent light fixtures that are suspected to include PCB-containing ballasts, approximately 374 mercury-containing fluorescent light tubes, at least 2 mercury-containing thermostats, two 275-gallon aboveground storage tanks, three elevators potentially with PCB-containing hydraulic fluid, dry-cleaning equipment, and numerous containers (contents unknown) ranging in size from 55-gallon drums to 5-gallon pails. These items should be removed and disposed of in accordance with OSHA, USEPA, and MDE regulations prior to the demolition/renovation of the on-site buildings.

## LIMITATIONS

The scope of this report is limited to the matters expressly covered herein. In preparing this report, ARM has relied upon information derived from observations at the time of the site inspection. ARM has made no independent investigation as to the accuracy or completeness of the information derived from the secondary sources and has assumed that such information was accurate and complete.

All findings, conclusions, and recommendations stated in this report are based upon facts and circumstances as they existed at the time that this report was prepared. A change in any fact or circumstance upon which this report is based, or the discovery or availability of new or different information, may adversely affect the findings, conclusions, and recommendations expressed in this report.

The ACM / LBP / HAZMAT inspection conducted by ARM was performed to identify accessible suspect materials. ARM performed this survey only on materials in readily accessible and visible areas. It should be noted that all three of the on-site buildings are in very poor condition and, as such, portions of the on-site buildings were only partially observed due to building deterioration, safety concerns, inaccessibility, or the lack of an identifiable access point. ARM's selection of sample locations and frequency is based on our observations and the assumption that like materials in the same area were homogeneous. Additional ACM and LBP sampling could be warranted in the future if new or differing materials or conditions are encountered.

## CLOSING

If you should have any questions or comments regarding this report or the associated findings, or if you require any additional information, please contact either of the undersigned at your earliest convenience.

Respectfully submitted,

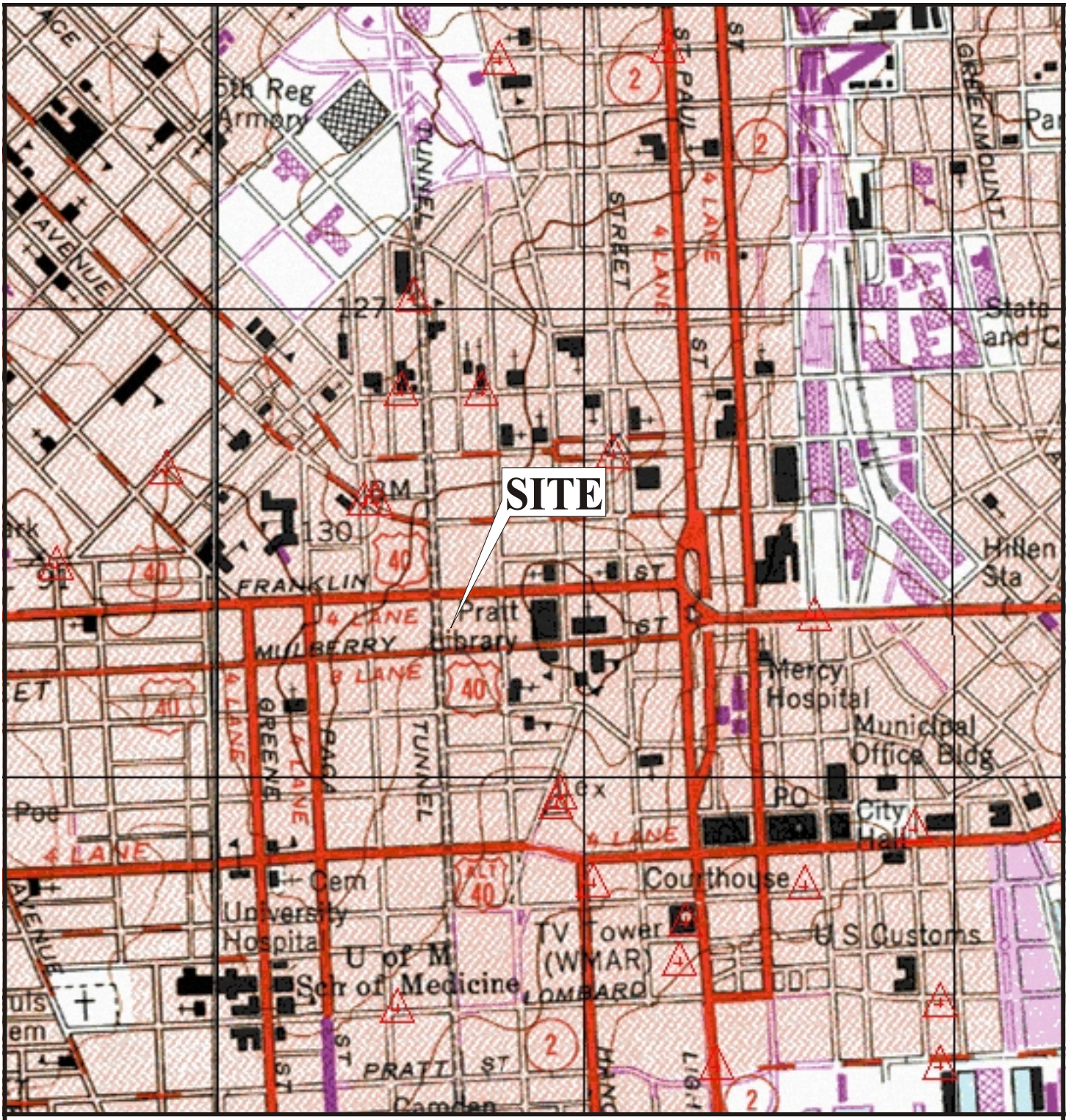
ARM Group Inc.

Mark J. Heisey, CEM, CES
Project Manager

Attachments:

- Figures
  - Figure 1 – Site Location Map
  - Figure 2 – Site Plan
- Appendix A – Notes and Definitions
- Appendix B –Asbestos Laboratory Report

# FIGURES




Base Map from the USGS 7.5 Minute Topographic Quadrangle of West Baltimore, Maryland

N

Scale
1:24,000

# Figure 1

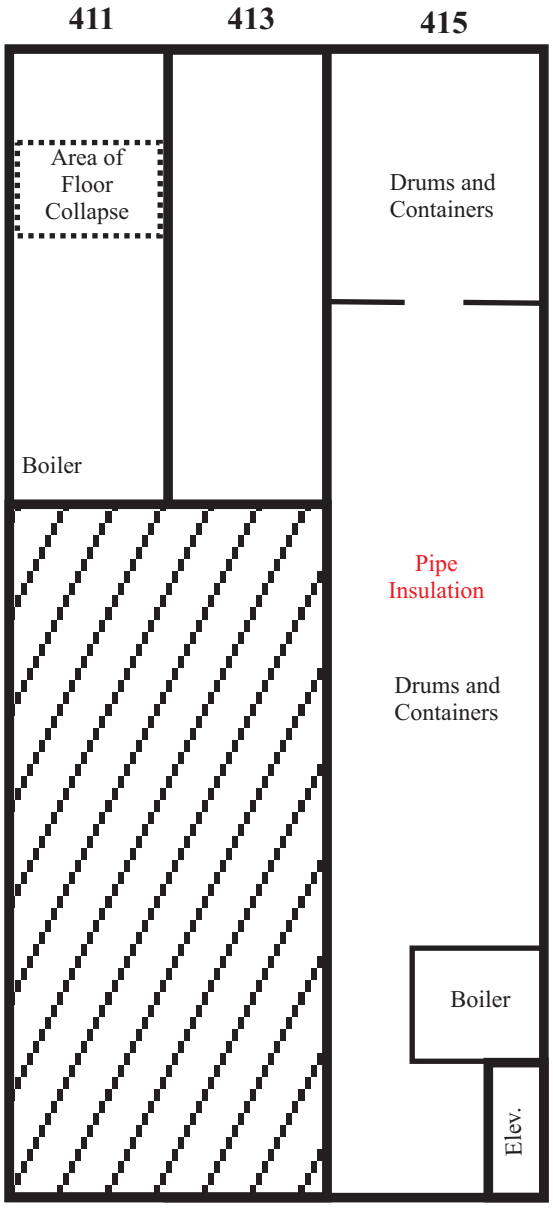
## Site Location Map

NoHo Pilot Project Property
411 415 North Howard Street
City of Baltimore, Maryland

August 2011

M11130

ARM Group Inc.
Earth Resource Engineers and Consultants
9175 Guilford Road, Suite 310, Columbia, MD




NOT TO SCALE

# Figure 2a

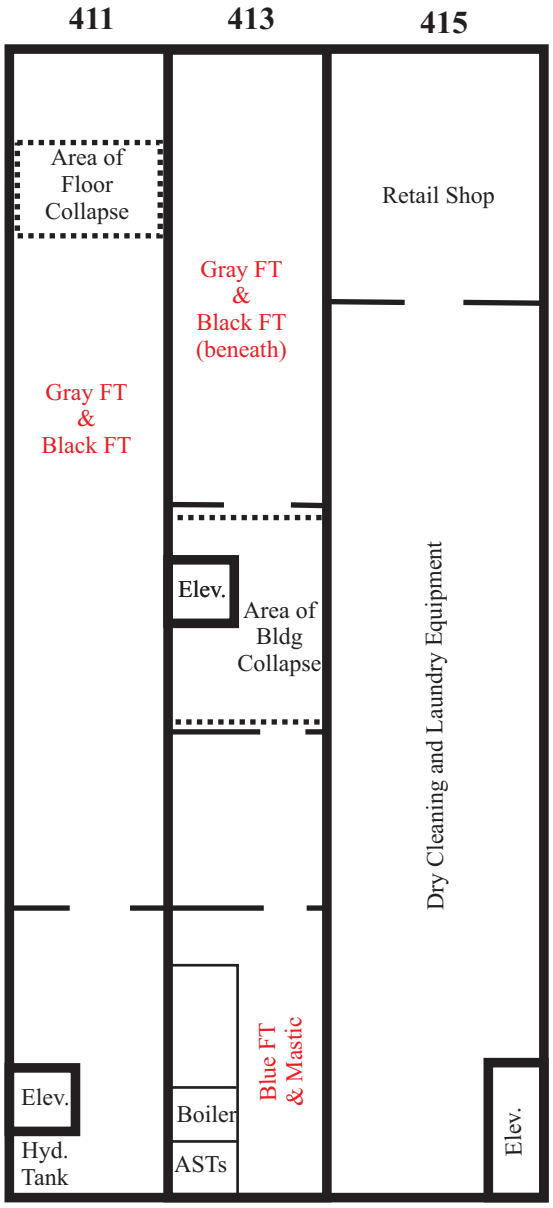
## Site Plan - Basement

NoHo Pilot Project Property
411 415 North Howard Street
City of Baltimore, Maryland

August 2011

M11130

ARM Group Inc.
Earth Resource Engineers and Consultants
9175 Guilford Road, Suite 310, Columbia, MD




NOT TO SCALE

# Figure 2b

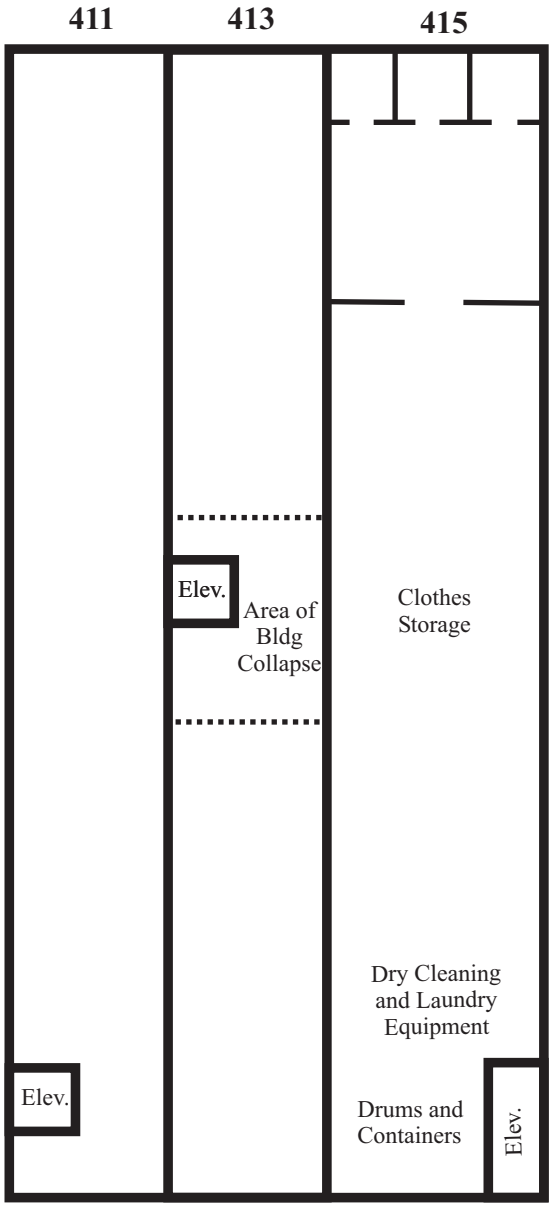
## Site Plan - 1st Floor

NoHo Pilot Project Property
411 415 North Howard Street
City of Baltimore, Maryland

August 2011

M11130

ARM Group Inc.
Earth Resource Engineers and Consultants
9175 Guilford Road, Suite 310, Columbia, MD




NOT TO SCALE

# Figure 2c

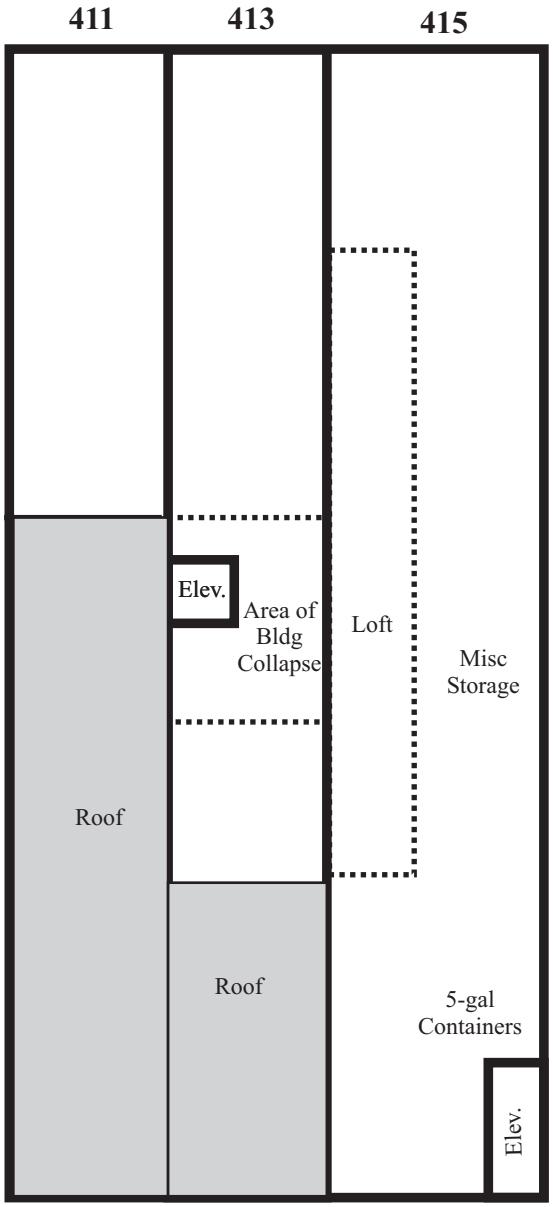
## Site Plan - 2nd Floor

NoHo Pilot Project Property
411 415 North Howard Street
City of Baltimore, Maryland

August 2011

M11130

ARM Group Inc.
Earth Resource Engineers and Consultants
9175 Guilford Road, Suite 310, Columbia, MD




NOT TO SCALE

# Figure 2d

## Site Plan - 3rd Floor

NoHo Pilot Project Property
411 415 North Howard Street
City of Baltimore, Maryland

August 2011

M11130

ARM Group Inc.
Earth Resource Engineers and Consultants
9175 Guilford Road, Suite 310, Columbia, MD

# APPENDIX A

NOTES AND DEFINITIONS



# Notes and Definitions

| | |
|---|---|
| SF – Square Feet | LF – Linear Feet |
| NA – Not Analyzed | NS – Not Sampled |
| Ch – Chrysotile (Type of Asbestos) | CAT I – USEPA Category I Asbestos Containing Material |
| ND – No Asbestos Detected | CAT II – USEPA Category II Asbestos Containing Material |
| NF – Non-friable | PACM – Presumed Asbestos Containing Material |
| F – Friable | UND – Undetermined at the Time of Inspection |

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In accordance with the Asbestos Hazard and Emergency Response Act (AHERA) 40 CFR 763, the following definitions are referenced:

Surfacing material – Material in a building that is sprayed-on, troweled-on, or otherwise applied to surfaces.

Miscellaneous material – Building material on structural components, structural members, or fixtures, such as floor and ceiling tiles. Material that is not defined as a thermal system insulation or surfacing material.

Thermal system insulation – Material in a building to prevent heat loss/gain in a structure or building component.

Good (undamaged condition) – Material with no or very limited visible damage or deterioration.

Friable – material in a building, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure, and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

Non-friable – material in a building which, when dry, may not be crumbled, pulverized, or reduced to powder by hand pressure.

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Areas of ACM were categorized in accordance with USEPA, National Emissions Standards for Hazardous Air Pollutants; Asbestos (NESHAPS) 40 CFR 61 as follows:

Category I Non-Friable ACM (CAT I) – Asbestos containing packing, gaskets, floor covering and asphalt roofing products containing more than one percent (1%) asbestos.

Category II Non-Friable ACM (CAT II) – Any material, excluding Category I non-friable asbestos containing material, containing more than one percent (1%) asbestos. Material, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Regulated Asbestos Containing Material (RACM) – Friable asbestos material, Category I non-friable asbestos containing material that has become friable, Category I non-friable asbestos material that will be or has been subject to sanding, grinding, cutting, or abrading. Category II non-friable asbestos containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition.

# APPENDIX B

LABORATORY ANALYSIS REPORT

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 786-5974 Email: cinnasblab@EMSL.com

Attn: **Mark Heisey**
**ARM Group, Inc.**
**1129 West Governor Road PO Box 797**
**Hershey, PA 17033-0797**

Fax: (717) 533-8605 Phone: (717) 533-8600
Project: **BDC NoHo M11130**

Customer ID: ARMG93
Customer PO: M11130
Received: 07/18/11 10:10 PM
EMSL Order: 041119195

EMSL Proj:
Analysis Date: 7/18/2011

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| 411-1A-Floor Tile<br>*041119195-0001* | 1ST FLOOR - 9X9 FLOOR TILE | Gray<br>Non-Fibrous<br>Heterogeneous | | 90% Non-fibrous (other) | **10% Chrysotile** |
| 411-1A-Mastic<br>*041119195-0001A* | 1ST FLOOR - 9X9 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| 411-1B-Floor Tile<br>*041119195-0002* | 1ST FLOOR - 9X9 FLOOR TILE | | | | **Stop Positive (Not Analyzed)** |
| 411-1B-Mastic<br>*041119195-0002A* | 1ST FLOOR - 9X9 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| 411-2A-Floor Tile<br>*041119195-0003* | 1ST FLOOR - 9X9 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | 95% Non-fibrous (other) | **5% Chrysotile** |
| 411-2A-Mastic<br>*041119195-0003A* | 1ST FLOOR - 9X9 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| 411-2B-Floor Tile<br>*041119195-0004* | 1ST FLOOR - 9X9 FLOOR TILE | | | | **Stop Positive (Not Analyzed)** |

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Project: **BDC NoHo M11130**

Customer ID: ARMG93
Customer PO: M11130
Received: 07/18/11 10:10 PM
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EMSL Proj:
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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | | Asbestos |
|---|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | | **% Non-Fibrous** | **% Type** |
| 411-2B-Mastic<br>*041119195-0004A* | 1ST FLOOR - 9X9 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 411-3A<br>*041119195-0005* | 1ST FLOOR - 12X12 CEILING TILE | Brown/White<br>Fibrous<br>Heterogeneous | 90% | Cellulose | 10% Non-fibrous (other) | **None Detected** |
| 411-3B<br>*041119195-0006* | 1ST FLOOR - 12X12 CEILING TILE | Brown/White<br>Fibrous<br>Heterogeneous | 90% | Cellulose | 10% Non-fibrous (other) | **None Detected** |
| 411-4A-Floor Tile<br>*041119195-0007* | 2ND FLOOR - 12X12 FLOOR TILE | Brown<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 411-4A-Mastic<br>*041119195-0007A* | 2ND FLOOR - 12X12 FLOOR TILE | Yellow<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 411-4B-Floor Tile<br>*041119195-0008* | 2ND FLOOR - 12X12 FLOOR TILE | Brown<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 411-4B-Mastic<br>*041119195-0008A* | 2ND FLOOR - 12X12 FLOOR TILE | Yellow<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | | | Asbestos |
|---|---|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **%** | **Fibrous** | **%** | **Non-Fibrous** | **% Type** |
| 413-1A<br>*041119195-0009* | 1ST FLOOR - BLACK WALL PAPER | Brown/Black<br>Fibrous<br>Heterogeneous | 98% | Cellulose | 2% | Non-fibrous (other) | **None Detected** |
| 413-1B<br>*041119195-0010* | 1ST FLOOR - BLACK WALL PAPER | Brown/Black<br>Non-Fibrous<br>Heterogeneous | 98% | Cellulose | 2% | Non-fibrous (other) | **None Detected** |
| 413-2A-Floor Tile<br>*041119195-0011* | 1ST FLOOR - 9X9 FLOOR TILE | Blue<br>Non-Fibrous<br>Heterogeneous | | | 95% | Non-fibrous (other) | **5% Chrysotile** |
| 413-2A-Mastic<br>*041119195-0011A* | 1ST FLOOR - 9X9 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | | 97% | Non-fibrous (other) | **3% Chrysotile** |
| 413-2B<br>*041119195-0012* | 1ST FLOOR - 9X9 FLOOR TILE | | | | | | **Stop Positive (Not Analyzed)** |
| 413-3A-Floor Tile<br>*041119195-0013* | 1ST FLOOR - 12X12 FLOOR TILE | Gray<br>Non-Fibrous<br>Heterogeneous | | | 97% | Non-fibrous (other) | **3% Chrysotile** |
| 413-3A-Mastic<br>*041119195-0013A* | 1ST FLOOR - 12X12 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | | 100% | Non-fibrous (other) | **None Detected** |

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | | Asbestos |
|---|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **%** | **Fibrous** | **% Non-Fibrous** | **% Type** |
| 413-3B-Floor Tile<br>*041119195-0014* | 1ST FLOOR - 12X12 FLOOR TILE | | | | | **Stop Positive (Not Analyzed)** |
| 413-3B-Mastic<br>*041119195-0014A* | 1ST FLOOR - 12X12 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 413-4A-Floor Tile<br>*041119195-0015* | BREAK ROOM - 12X12 FLOOR TILE | Gray<br>Non-Fibrous<br>Heterogeneous | | | 92% Non-fibrous (other) | **8% Chrysotile** |
| 413-4A-Mastic<br>*041119195-0015A* | BREAK ROOM - 12X12 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 413-4B-Floor Tile<br>*041119195-0016* | BREAK ROOM - 12X12 FLOOR TILE | | | | | **Stop Positive (Not Analyzed)** |
| 413-4B-Mastic<br>*041119195-0016A* | BREAK ROOM - 12X12 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 413-5A-Backing<br>*041119195-0017* | 2ND FLOOR - CARPET BACKING | Black<br>Fibrous<br>Heterogeneous | 20%<br>60% | Cellulose<br>Synthetic | 20% Non-fibrous (other) | **None Detected** |

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | | Asbestos |
|---|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | | **% Non-Fibrous** | **% Type** |
| 413-5A-Mastic<br>*041119195-0017A* | 2ND FLOOR - CARPET BACKING | Gray<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 413-5B-Backing<br>*041119195-0018* | 2ND FLOOR - CARPET BACKING | Black<br>Fibrous<br>Heterogeneous | 20%<br>60% | Cellulose<br>Synthetic | 20% Non-fibrous (other) | **None Detected** |
| 413-5B-Mastic<br>*041119195-0018A* | 2ND FLOOR - CARPET BACKING | Gray<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 415-1A-Floor Tile<br>*041119195-0019* | 1ST FLOOR - 12X12 FLOOR TILE | Gray<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 415-1A-Mastic<br>*041119195-0019A* | 1ST FLOOR - 12X12 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 415-1B-Floor Tile<br>*041119195-0020* | 1ST FLOOR - 12X12 FLOOR TILE | Gray<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 415-1B-Mastic<br>*041119195-0020A* | 1ST FLOOR - 12X12 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | | | Asbestos |
|---|---|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **%** | **Fibrous** | **%** | **Non-Fibrous** | **% Type** |
| 415-2A<br>*041119195-0021* | 1ST FLOOR - 2X4 CEILING TILE | Gray/White<br>Fibrous<br>Heterogeneous | 50%<br>30% | Cellulose<br>Min. Wool | 20% | Non-fibrous (other) | **None Detected** |
| 415-2B<br>*041119195-0022* | 1ST FLOOR - 2X4 CEILING TILE | Gray/White<br>Fibrous<br>Heterogeneous | 50%<br>30% | Cellulose<br>Min. Wool | 20% | Non-fibrous (other) | **None Detected** |
| 415-3A<br>*041119195-0023* | 1ST FLOOR - PLASTER SKIM | White<br>Non-Fibrous<br>Heterogeneous | | | 100% | Non-fibrous (other) | **None Detected** |
| 415-3B<br>*041119195-0024* | 1ST FLOOR - PLASTER SKIM | White<br>Non-Fibrous<br>Heterogeneous | | | 100% | Non-fibrous (other) | **None Detected** |
| 415-4A<br>*041119195-0025* | 1ST FLOOR - TRANSITE WB | Gray<br>Fibrous<br>Heterogeneous | | | 70% | Non-fibrous (other) | **30% Chrysotile** |
| 415-4B<br>*041119195-0026* | 1ST FLOOR - TRANSITE WB | | | | | | **Stop Positive (Not Analyzed)** |
| 415-5A-Floor Tile<br>*041119195-0027* | 2ND FLOOR - 9X9 FLOOR TILE | Brown<br>Non-Fibrous<br>Heterogeneous | | | 100% | Non-fibrous (other) | **None Detected** |

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | | | Asbestos |
|---|---|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **%** | **Fibrous** | **%** | **Non-Fibrous** | **% Type** |
| 415-5A-Mastic<br>*041119195-0027A* | 2ND FLOOR - 9X9 FLOOR TILE | Black<br>Fibrous<br>Heterogeneous | 60% | Cellulose | 40% | Non-fibrous (other) | **None Detected** |
| 415-5B-Floor Tile<br>*041119195-0028* | 2ND FLOOR - 9X9 FLOOR TILE | Brown<br>Non-Fibrous<br>Heterogeneous | | | 100% | Non-fibrous (other) | **None Detected** |
| 415-5B-Mastic<br>*041119195-0028A* | 2ND FLOOR - 9X9 FLOOR TILE | Black<br>Fibrous<br>Heterogeneous | 60% | Cellulose | 40% | Non-fibrous (other) | **None Detected** |
| 415-6A<br>*041119195-0029* | 2ND FLOOR - 9X9 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | | 100% | Non-fibrous (other) | **None Detected** |
| 415-6B<br>*041119195-0030* | 2ND FLOOR - 9X9 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | | 100% | Non-fibrous (other) | **None Detected** |
| 415-7A-Floor Tile<br>*041119195-0031* | 2ND FLOOR - 9X9 FLOOR TILE | Green<br>Non-Fibrous<br>Heterogeneous | | | 100% | Non-fibrous (other) | **None Detected** |
| 415-7A-Mastic<br>*041119195-0031A* | 2ND FLOOR - 9X9 FLOOR TILE | Black<br>Non-Fibrous<br>Heterogeneous | | | 100% | Non-fibrous (other) | **None Detected** |

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| | | | Non-Asbestos | | | Asbestos |
|---|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | | **% Non-Fibrous** | **% Type** |
| 415-7B-Floor Tile<br>*041119195-0032* | 2ND FLOOR - 9X9 FLOOR TILE | Green<br>Non-Fibrous Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 415-7B-Mastic<br>*041119195-0032A* | 2ND FLOOR - 9X9 FLOOR TILE | Black<br>Non-Fibrous Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| 415-8A<br>*041119195-0033* | ROOF - ROOFING MATERIAL DEBRIS | Black<br>Non-Fibrous Heterogeneous | 20% | Cellulose | 80% Non-fibrous (other) | **None Detected** |
| 415-8B<br>*041119195-0034* | ROOF - ROOFING MATERIAL DEBRIS | Black<br>Non-Fibrous Heterogeneous | 20% | Cellulose | 80% Non-fibrous (other) | **None Detected** |

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